

LC0905-66 ENT(m)/EPF(c)/ENP(j) RM

ACCESSION NR: AP5016635

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678.046.2.002.2.001.4 23

AUTHORS: Zuyev, V. P.; Gilyazetdinov, L. P.; Gyul'misaryan, T. G.; Safronov, N. Ya.; Vernshteyn, I. D.; Glagolev, V. I.; Tsygankova, E. I.; Sokolova, V. V.; Bystrov, K. M.; Khokhlov, B. P.

TITLE: Some peculiarities of the production of carbon black PM 70 in cyclone-type reactors by using thermocatalytic gas oil

SOURCE: Kauchuk i rezina, no. 6, 1965, 19-24

TOPIC TAGS: gas oil fraction, carbon black, catalytic cracking / PM 70 carbon black

ABSTRACT: The production of active carbon black PM-70 from a 1:1 mixture of thermocatalytic gas oil and green oil was investigated to correct certain technological parameters and to determine the behavior of carbon black during its recovery and processing. The tabulated physico-chemical properties of green oil, and their mixture show that the thermocatalytic gas oil is distinguished by a high polycyclic aromatic hydrocarbon content. The analysis of several gas oil fractions showed that its kinematic viscosity at 50C varies over a range of

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9.5-11.8 x 10<sup>-2</sup> m<sup>2</sup>/sec. The viscosity of the 1:1 mixture varies from 3.6 to 3.9 x 10<sup>-2</sup> m<sup>2</sup>/sec. The kinematic viscosity plotted against heating temperature shows that the green oil and gas oil have the same viscosity only at a temperature of 280-300C. The viscosity value of 1.05 x 10<sup>-2</sup> m<sup>2</sup>/sec is reached for green oil only at 100C, and for gas oil and green oil mixture at 140C. Pure gas oil has this viscosity at 185C. The high viscosity, high boiling point, and the wide fractional composition of the gas oil make it necessary to preheat it by 80-100C higher than the green oil at minimum 160C before its introduction into the reactors. The average diameter of the droplet of raw material is plotted against the vaporizing air flow rate and the temperature before the atomizer. With an increase in the air flow rate from 0.45 to 1.0 m<sup>3</sup>/kg, the diameter of the droplet decreased 2.0-2.2 times. During the experiments the gas oil content in the mixture, the heating temperature, and the specific flow rate of vaporizing air were varied. The other technological parameters were almost constant (total specific air flow rate of 4.8-5.1 m<sup>3</sup>/kg, gas flow rate of 0.25-0.28 m<sup>3</sup>/kg of raw material, reactor temperature of 1395-1400C). Tabulated data show that by increasing the air flow rate and temperature the specific surface and the oil content of carbon black were increased, while the optical density of the benzene extract of carbon black decreased. The technological data and properties of carbon black PM-70

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are tabulated and discussed. It was established that the carbon black yield is almost the same as that obtained from pure green oil. The thermophysical properties of the gaseous reaction products of carbon black formation are compared. Vulcanizates obtained with FM-70 carbon black have a higher tear strength due to the larger specific surface and oil content. Experimental data show that a carbon black plant equipped with cyclone-type reactors and a dry system of carbon black recovery can be altered to use a mixture of gas oil and green oil. An increase in the vaporizing air flow rate leads to an increased dispersal and oil content of FM-70 carbon black and to the decrease in coking of reactors. It is recommended to increase the air flow rate to 1.0 m<sup>3</sup>/kg oil. The addition of gas oil to green oil results in the stabilization of the granulation operation on the ASA 1 drums. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute for the Tire Industry); Novo-Yaroslavskiy sazhevy zavod (Novo-Yaroslavl Carbon Black Plant)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, GC

NO REF SOV: 005

OTHER: 001

Card 3/3 SP

VERONSKIY, G.I. (Novosibirsk, ul. Lermontova, d.45, kv.70)

Splenoportographic determination of the spreading of stomach tumors. Vop. onk. 10 no.2:28-34 '64. (MIRA 17:7)

1. Iz kafedry gosspital'noy khirurgii (zav. kafedroy - dotsent B. A. Vitsyn) Novosibirskogo meditsinskogo instituta (rektor-zasluzhennyy deyatel' nauki prof. G.D. Zaleskiy).

ANTONYUK, P.P. & VERNYAYEV, O.; YERSHOV, P.

Cultivator for mulberry shrub plantations. Trakt. 1 sel'khozmasb.  
no. 12:24-25 D '58. (MIRA 11:12)  
(Cultivators) (Mulberry)

ANTONYUK, P.P.; YERSHOV, P.G.; VERNYAYEV, O.V.

KSSh-5 mounted wide-range orchard cultivator. Trakt. 1 sel'khozmasb.  
no.4:36-37 Ap '59. (MIRA 12:5)

1.Zavod "Krasnyy Aksay."  
(Cultivators)

VERNYAYEV, O.V.

Working parts of the cultivator. Trakt. 1 sel'khoz mash. no. 12:22-25  
D '59. (MIRA 13:3)

1. Rostovskiy-na-Donu institut sel'skokhozyaystvennogo mashinostroye-  
niya.

(Cultivators)

VERNYAYEV, O. V., Cand Tech Sci -- (diss) "Theory, construction, and study of the performance of the active functioning part of the cultivator." Khar'kov, 1960. 23 pp; with charts; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Khar'kov Polytechnic Inst im V. I. Lenin); 150 copies; free; list of author's works at end of text (11 entries); (KL, 52-60, 119)



VERNYAYEVA, T.I. assistant

Treatment of peritonitis according to data from the medical and  
sanitary section of the Textile Combine. Med. zhur. Uzb. no;11:  
69-70 N '61. (MIRA 15:2)

1. Iz kafedry obshchey khirurgii sanitarnogo i pediatri cheskogo  
fakul'tetov (zav. - prof. A.M.Geller) Tashkentskogo gosudarstvennogo  
meditsinskogo instituta i medsanchnosti Tashkentskogo tekstil'nogo  
kombinata (glavnyy vrach - A.K.Kamalov).  
(TASHKENT—PERITONITIS)

DONSKOY, S.M.; ZEMSKOV, N.Ya.; OSFNOV, V.I.; POTAPOV, A.I.;  
UDALIKHINA, A.S.; YAROSHUK, D.Ya.; VAYNER, M.S.; VERNYI,  
Ye.A.; CHURKIN, D.I.; GERASIMOV, K.A.; ZIBRIN, D.A.;  
AYKHENVAL'D, Ye.L.; KOZLOV, A.I.; BULANOV, A.G.;  
OSTROVSKAYA, L.N.; TAUBES, I.S.; PETROV, Z.I.; POTEPALOV,  
V.A.; PECHONYI, A.D.; TROFIKOVA, A.S., tekhn. red.

[Development of power engineering in the Tatar A.S.S.R.]  
Razvitie energetiki Tatarskoi ASSR. Kazan', Tatarkoe knizhnoe  
izd-vo, 1961. 145 p. (MIRA 15:2)

1. Tatar A.S.S.R. Sovet Narodnogo khozyaystva. Upravleniye  
energeticheskoy promyshlennosti.  
(Tatar A.S.S.R.—Power engineering)

VERNYI, A.I.

Preparation of the adhesive for labeling machines. Spirt. prom.  
25 no.4:39-40 '59. (MIRA 12:7)  
(Adhesives) (Liquor industry--Equipment and supplies)

VERNYI, A.N.

Automatic stamp making aluminum caps. Spirt.prom. 27 no.1:32-34  
'61. (MIRA 14:2)

(Machine tools)

VERNYI, A.N.; GOFSHTEYN, B.Ya.

Industrial plant for the production of feed biomycin. Spirt.  
prom. 29 no.6:31-32 '63. (MIRA 16:10)

1. Khabarovskiy sovet narodnogo khozyaystva.  
(Starch industry—By-products)  
(Chlortetracycline)

VERNYI, A.N. Prinsipal uchastnye: LUKIN, B.S., slesar'; NAMONTOVA, O.K., red.; FILATOVA, G.M., tekhn. red.

[Automatic equipment for liqueur and vodka distilleries] Avtoratsionnoye oborudovanie likero-vodochnykh zavodov; rukovodstvo po ekspluatatsii i naladke. Blagoveshchensk, Amurskoe knizhnoe izd-vo, 1960. 62 p. (MIRA 15:12)

1. Russia (1917- R.S.F.S.R.) Amurskiy ekonomicheskiy administrativnyy rayon. Zavodoupravleniye spirtovodochnykh predpriyatiy.

2. Glavnyy inzhener zavodoupravleniya spirtovodochnykh predpriyatiy Amurskogo sovnarkhoza (for Vernyy).

(Amur Province--Distilling industries--Equipment and supplies)  
(Machinery, Automatic)

VERNYI, A.N.; ZHURAVLEVA, S.S., vedushchiy red.

[Modernization of the Blagoveshchensk Liqueur and Vodka Plant]  
Opyt rekonstruktsii Blagoveshchenskogo likero-vodochnogo zavoda.  
Moskva, Gos.nauchno-issl.in-t nauchn. i tekhn.informatsii, 1959.  
6 p. (MIRA 13:6)

(Blagoveshchensk (Amur Province)--Liquor industry)

VERNYI, S.S., tekhnik po zashchite rasteniy

Worries of a collective farm mechanic. Zashch. rast. ot vred. i  
bol. 8 no.2:9 F '63. (MIRA 16:7)

1. Kolkhoz "Druzhba" Poltavskogo rayona, Poltavskoy oblasti.  
(Plants, Protection of)



VERNIY, Ye.; FEDYANIN, M.

The operation of the hourly bonus system. Sots.trud no.8:78-80  
Ag '56. (MIRA 9:10)

1. Nachal'nik planovo-ekonomicheskogo otдела Kazanskoy Teplovoy  
elektricheskoy tsentral'noy stantsii no.1 (for Fedyanin). 2. Starshiy  
inzhener (for Fedyanin).  
(Electric power plants) (Bonus system)

MARKOV, V.K., doktor khim. nauk, prof.; VERNYI, Ye.A., kand. fiz.-mat. nauk; VINOGRADOV, A.V., kand. khim. nauk; YELINSON, S.V., kand. khim. nauk; KLYGIN, A.Ye., kand. khim. nauk; MOISEYEV, I.V., kand. khim. nauk; PANASENKOVA, Ye.I., red.; ALYAB'YEV, A.F., red.

[Uranium; methods for its determination] Uran; metody ego opredeleniia. Izd.2., ispr. i dop. Moskva, Atomizdat, 1964. 502 p. (MIRA 17:12)

VERNY ~~WEA~~

V1610

SPECTRUM AND ENERGY LEVELS OF THE POLONIUM  
ATOM. E. A. Voroyt, A. N. Zaidel and K. G. Shvebel'bitz. (2)  
Doklady Akad. Nauk S.S.S.R. 104, 710-12(1955) Oct. 11  
(in Russian)

A detailed study of the Po spectrum at 400 to 500°C was made. Discharge of Po vapors was used as the source of light. Registration of spectra in ultraviolet and visible areas was done on a two-meter spectrograph with diffraction grating. Instruments of high dispersion permitted the determination of the wave length of most of the lines with the accuracy up to 0.01 Å. (R.V.J.)

SOV/51-6-2-33/39

AUTHORS: Vernyy, Ye.A. and Yegorov, V.N.

TITLE: Isotopic Shifts in the Spectrum of Thorium  $\text{Th}^{232}$ - $\text{Th}^{229}$  (Izotopicheskiye sdvigi v spektre toriya  $\text{Th}^{232}$ - $\text{Th}^{229}$ )

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 2, pp 262-263 (USSR)

ABSTRACT: Isotopic shifts in the spectrum of thorium were measured in a sample containing  $\text{Th}^{229}$  and  $\text{Th}^{232}$  in the ratio 1:1. The thorium spectrum was excited in an alternating current arc at 5 Å. To suppress cyanogen bands the thorium sample was excited in an atmosphere of carbon dioxide. A two-metre spectrograph with a diffraction grating in the Paschen mounting was employed. The linear dispersion of the instrument was 3.4 Å/mm in the first order. Isotopic shifts were observed in over 250 lines in the region 2600-4400 Å. The results of measurements on 76 lines, in which the shift could be observed most clearly, are given in a table on p 263. This table gives also the ratio of the shifts  $\Delta\delta(232-229)/\Delta\delta(232-230)$  which are related to the even-uneven effect. Values of the isotopic shifts between  $\text{Th}^{232}$  and  $\text{Th}^{230}$  lines were taken from a paper by Stukenbroeker and McNally (Ref 1). For the majority of the lines this ratio lies between the limits of 1.6 and 1.8, which agrees with the general nature of even-uneven shifts in heavy elements (Refs 2-4). For

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507/51-6-2-33/39

# Isotopic Shifts in the Spectrum of Thorium Th<sup>232</sup>-Th<sup>229</sup>

certain lines this value is somewhat higher and the difference is greater than the experimental error; the reasons for such departures are not clear. Spectra of samples with Th<sup>229</sup> and Th<sup>232</sup> in the ratios 1:1 and 1:20 were also photographed by means of a diffraction autocollimating spectrograph in the fifth order. Linear dispersion of this spectrograph was about 1 Å/mm. Broadening of 4019.137, 4273.363, 4282.044 and 4331.114 Å Th<sup>229</sup> lines, because of hyperfine structure, was observed. This structure could not be resolved by means of the diffraction spectrograph used. The width of the hyperfine structure was 0.3-0.4 mÅ. Investigations of the isotopic shifts and the hyperfine structure of Th<sup>229</sup> lines are being continued. Acknowledgments are made to V.K. Markov and M.F. Korinskaya for separation and purification of Th<sup>229</sup>. There are 1 table and 4 English references.

SUBMITTED: August 30, 1958

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VERNYI, Ye.A.; YEGOROV, V.N.

Isotopic shifts in the thorium  $\text{Th}^{232}$  -  $\text{Th}^{229}$  spectrum. Opt. 1  
spektr. 6 no.2:262-263 T '59. (MIRA 12:4)  
(Thorium--Spectra)

S/051/60/009/006/002/018

E201/E191

AUTHORS: Vernyy, Ye.A., and Yegorov, V.N.

TITLE: The Isotopic Effect in the Thorium Spectrum

PERIODICAL: Optika i spektroskopiya, 1960, Vol.9, No.6, pp 692-702

TEXT: The isotopic shift in the thorium spectrum was studied by Stukenbroeker and McNally (Ref.1); they used  $Th^{232}$  and  $Th^{230}$ . A sample had equal proportions of  $Th^{232}$  and  $Th^{229}$ . The spectrum was excited in an a.c. arc, using currents of 4-6 A. A solution of thorium chloride was deposited by evaporation on a carbon electrode. To avoid interference from cyanogen bands in the 2600-4400 Å region, the thorium spectrum was excited in carbon dioxide. The spectrum was recorded with a two-metre diffraction spectrograph using Paschen's mounting. Individual lines were studied with a self-collimating diffraction spectrograph DAC (DAS). The isotopic shift was recorded for 247 thorium lines: 178 of them were ascribed to Th II, 20 lines were due to Th I, and 49 were not identified. The shifts of the Th I lines are given in Table 1 and those of the Th II lines are given in Tables 2A and 2B. The

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# The Isotopic Effect in the Thorium Spectrum

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E201/E191

Th<sup>232</sup>...Th<sup>229</sup> shift was 1.2 times greater in the Th II lines than in the Th I lines. It was always positive, i.e. the Th<sup>229</sup> lines were displaced towards shorter wavelengths. Table 3 lists the mean isotopic shifts of uranium lines, taken from Striganov and Korostyleva's work (Ref.9). Table 4 gives the maximum and minimum shifts for various electronic configurations of Th I and Th II. The results given in Table 4 were used to derive the most probable identification of some thorium lines (Table 5). The relative isotopic shifts of individual Th II lines are listed in Tables 6A and 6B; Table 7 gives the relative shifts of the Th I lines. From the results obtained the even-odd effect was deduced and the deformation of the Th<sup>229</sup> nucleus was calculated. Acknowledgements are made to V.K. Markov and M.F. Korinfskaya for separation and purification of Th<sup>229</sup> and to Yu.P. Dontsov for his advice. There are 7 tables and 22 references: 7 Soviet, 12 English, 1 German, 1 Dutch and 1 Danish.

SUBMITTED: March 7, 1960

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SOV/75-15-1-5/29

AUTHORS: Vernyy, Ye. A., Yegorov, V. N.

TITLE: Spectral Determination of Aluminium in Uranium

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol 15, Nr 1,  
pp 24-26 (USSR)

ABSTRACT: A description of a new method of spectral determination of aluminium in uranium (from  $1 \times 10^{-5}$  to  $3 \times 10^{-2}\%$  Al) based on fractional distillation with a carrier is given. Construction of the electrode used is important. The electrode, shown in Fig. 1, was found to be most suitable for the determination.

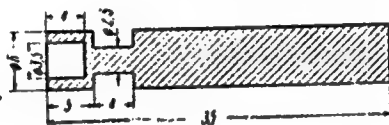


Fig. 1.

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Spectral Determination of Aluminium in Uranium

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The electrode shown in Fig. 2 was used for the investigation of the effect of barium on the intensity of aluminium lines.

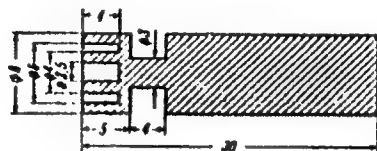


Fig. 2.

AgCl, SrCO<sub>3</sub>, and BaCO<sub>3</sub> were tested as carriers. BaCO<sub>3</sub> was finally selected and used. Spectra were taken on the ISP-51 spectrograph with a UF-85 A camera. Exposure time, 30 sec, current, 18 amp; a mixture consisting of 1 g U<sub>3</sub>O<sub>8</sub>, 100 mg of BaCO<sub>3</sub>, and 50 mg of carbon powder was used. The sample placed on the carbon electrode (see Fig. 1) weighed 25 mg. Calibration graphs were used. Sensitivity:  $1 \times 10^{-3}\%$  Al. Results of the investigation are given in

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Spectral Determination of Aluminium in Uranium

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Tables 1 and 2.

Comparison of the results of Al determination by  
spectral and chemical methods

Table 1

Sample	Method		Sample	Method	
	Chemical	Spectral		Chemical	Spectral
1	$5 \times 10^{-3}$	$6 \times 10^{-3}$	4	$3.8 \times 10^{-2}$	$3.3 \times 10^{-2}$
2	$1.1 \times 10^{-2}$	$1.3 \times 10^{-2}$	5	$2.3 \times 10^{-2}$	$2.2 \times 10^{-2}$
3	$4 \times 10^{-3}$	$4.5 \times 10^{-3}$	6*	$9 \times 10^{-3}$	$1 \times 10^{-2}$

\* Sample contained 1.3% Mo

There are 2 figures; 2 tables; and 6 references, 1  
U.S., 5 Soviet. The U.S. reference is: Stribner,  
B. P., Mullin, H. R., J. Res. Nat. Bur. Stand., 37,  
379 (1946).

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SUBMITTED:

January 5, 1959

Spectral Determination of Aluminium in Uranium

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SOV/75-15-1-5/29

Influence of third elements on the Al determination <sup>Table 2</sup>

(1) Element; (2) not introduced; (3) admixtures introduced (in %); (4) Na in form of  $\text{Na}_2\text{CO}_3$ ; (5) Fe in form of  $\text{Fe}_2\text{O}_3$ ; (6) Mo in form of  $\text{MoO}_3$ .

(1)	(2)	(3)							
		0.1	0.3	1.0	1.3	2	5	7	10
(4)	$9 \cdot 10^{-3}$	$8,3 \cdot 10^{-3}$	$8,5 \cdot 10^{-3}$	$9,1 \cdot 10^{-3}$	—	$9,5 \cdot 10^{-3}$	—	—	—
Ca:	$9 \cdot 10^{-3}$	$9,7 \cdot 10^{-3}$	$8,6 \cdot 10^{-3}$	$9,2 \cdot 10^{-3}$	—	$9,8 \cdot 10^{-3}$	—	—	—
(5)	$9 \cdot 10^{-3}$	$3,7 \cdot 10^{-3}$	$9 \cdot 10^{-3}$	$6,5 \cdot 10^{-3}$	—	—	—	—	—
(6)	$9 \cdot 10^{-3}$	—	—	—	$9,1 \cdot 10^{-3}$	$8,8 \cdot 10^{-3}$	$8,3 \cdot 10^{-3}$	$8,2 \cdot 10^{-3}$	$6,4 \cdot 10^{-3}$

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analytical chemistry of uranium

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ponents of the materials -- 15

Subject Index — 189

SUBMITTED: 218 Sep 64

SUB CODE: 00

OTHER: 60?

N) REF SOV: L70  
Card 2/2

VERO, E.

"Changing Shifts in the Machine Industry Without Work Stoppage." P. 24.  
(TOBETERMELES, Vol. 7, No. 1, Jan. 1953, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 4,  
No. 1, Jan. 1955, Uncl.

VERO-HETENYI, M. (Mrs)

Adjustment of point interpolation through distance measurements using the method for the adjustment of conditional observations. Acta techn Hung 47 no. 1/2:229-239 '64.

1. Geodatisches Forschungslaboratorium der Ungarischen Akademie der Wissenschaften, Sopron.



VERO, 1.

Distr: 4E1c

106 Design of the television tower in Budapest. I. Ver 6.  
Magyar Építésh. Vol. 6, 1957, No. 9-10, pp. 305-317,  
12 figs.

The approx. 55 m high television tower consists of 14 storeys including ground floor and basement, the latter accommodates the lift engines and the cable gallery. Owing to the very short time allotted for building — 3 to 4 months — a steel frame structure has been used. As a fire prevention measure all steel columns were encased in concrete. This also resulted in economies in steel since the columns had to bear only the dead weight of the empty steel framing. The floors were constructed partly of precast reinforced concrete elements. The weight of the riveted steel structure is approx. 240 tons, the area of the precast floors is 2000 sq. m. The construction of the foundations, column encasements and other monolithic structures involved the pouring of 600 cu. m of site concrete. Site joints for the tower were bolted throughout. A wind pressure of 120 kg per sq. m and a form coefficient of 1.20 were adopted in strength computations. The floors were designed for a uniformly distributed live load of 500 kg per sq. m. The tower is built on dolomite rock with a maximum pressure of 8.10 kg per sq. cm. Tensile stresses in the columns are absorbed by anchoring the bases into the foundations. The steel structures were mounted according to a previously determined schedule. As revealed by the comparative cost analysis, a corresponding structure in reinforced concrete would have been significantly cheaper, but the time required for the construction would have been unacceptably long.

VERO, Imre

"Dimensioning; numerical tables and examples" by Loser. Reviewed by  
Imre Vero. Melyepitestud szemle 13 no.10:466 0 '63.

VERO, Imre

"Handbook of the construction industry" by Kardos, Valko.  
Reviewed by Imre Vero. Melyspitestud szemle 13 no.5:223  
My '63.

VERO, Imre

"Modern sheeting methods" by Laszlo Mohacsi. Reviewed by  
Imre Vero. Melyepitestud szemle 13 no.2/3:93 F-Mr '63.

VERO, Imre

"Statics" by Lorand Tobias, Zoltan Visy. Reviewed by  
Imre Vero. Melyepitestud szemle 13 no.2/3:100 F-Mr '63.

VERO, Istvan, ckleveles kohomernok

. Hungarian experiences in manufacturing pig iron by means of acid  
slag. Koh lap 97 no.12:573-576 D '64.

1. Danubian Ironworks.

1ST AND 2ND COPIES										3RD AND 4TH COPIES									
PROCESSING AND PROPERTY INDEX																			
<p><b>Investigations on the Equilibrium Relations of Heavily Alloyed Bronzes.</b>  <b>III.—The Copper-Rich Copper-Manganese-Tin Alloys.</b> J. Verő (<i>Hidnyá-  mérnöki és Erdőmérnöki Főiskola bányászati és kohászati osztályának Közle-  ményei</i>; <i>Mitt. berg. hütt. Abt. kg. ung. Hochschule für Berg. u. Forstwesen  zu Sopron</i>, 1933, 5, (Reprint), 28 pp.).—[In German with English summary.]—  The ternary system copper-tin-manganese has been investigated by thermal  analysis and micrographical examination up to 15% manganese and from the  copper corner to the quasi-binary section manganese (Cu<sub>3</sub>Sn). The results are  shown in a series of equilibrium diagrams for constant manganese contents,  and space models of the solidification equilibria and transformations in the  solid state are given together with photographs of characteristic structures  of the manganese-rich alloys. Addition of manganese to bronze reduces the  solubility of tin in the <math>\alpha</math>-phase; with more than 4% manganese (limit of solu-  bility in <math>\alpha</math>- and in <math>\beta</math>-tin-copper) the appearance and transformations of all  bronzes are changed, the <math>\beta</math>-phase being entirely suppressed, together with  all its reactions. A new phase, designated "X," appears in the micro-  structures when 5% or more manganese is present; this phase is formed only  in the solid state by separation from the <math>\gamma</math>-phase on cooling. The appearance  of the (<math>\alpha</math> + <math>\delta</math>)-eutectoid is considerably altered by the presence of much X,  and, with 10% manganese, is characteristic of an entirely new eutectoid,  although such an eutectoid cannot represent true equilibrium, since it appears  only when X is formed from the (<math>\alpha</math> + <math>\gamma</math>)-state and never when it is formed  from pure <math>\gamma</math>. In the latter case the structure of alloys which have been slowly  cooled consists of large globular aggregates of X-crystals distributed through-  out a ground-mass of the ordinary binary bronze constituents; this structure  is particularly well marked in the alloy with 10% manganese and 27% tin,  whereas the slowly cooled alloy with 15% manganese and 17.5% tin has a  characteristic pearlitic structure of the <math>\alpha</math> + <math>\delta</math> + X pseudo-eutectoid.—A. R. P.</p>																			
<p>434.514 METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>130-179.0214</p>										<p>130-179.0214</p>									
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**Surface and Venting Property of Moulding Sands.** J. Verő (*Béngaméradi és Kádómeradi Földművelésügyi Iskolák; középiskolai kémiaosztály*)  
*(Mit. berg. Akad. Abt. Kg. u. ng. Heckerstraße für Berg- u. Fortw. in Sopron,*  
1934, 8, 99-110; *C. Abt., 1935, 34, 5530).*—Tests were carried out with Stein-  
er's apparatus to investigate the effect of grain-size on the venting property  
of moulding sands; only quartz sand free of clay and dust was used. A linear  
relationship exists between the factors expressing the venting property,  
namely the time occupied by the passage of a gas, and the difference of pressure  
effected by the passage of a gas. Another linear relation exists between the  
square root of the resistance and the reciprocal dimensions of the grains, but  
only for grains of equal size and sands free of mixtures; the latter have always  
a greater resistance than pure quartz sand. The surface factor, i.e. the whole  
surface of grains contained in a unit volume or weight, is of deciding influence.  
—8, (1).

OPEN  
MATERIALS INDEX  
COMPASS CLIMAT  
CROSS SECTION WORKING

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

SCHEIDT GEF. INV. 161  
SCHEIDT GEF. INV. 161

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SCHEIDT GEF. INV. 161



117 AND 119 99183 100 AND 117 100781

PROCESSED AND REPOSTED INFO

21

COMMON ELEMENTS

OPEN

COMMON VARIANTS

↑What Can Be Expected from Beryllium? Josef Verö (*Bányászati és Metallurgiai Lapok*, 1934, 67, 33-38, 58-63; *Chem. Zentr.*, 1934, 106, 1, 3109-3110).—A critical review of the metallurgy and the uses of beryllium in alloying. It is concluded that the chief uses of beryllium are as a deoxidizer for copper and nickel and as a hardener for copper, nickel, and iron alloys; in all cases, however, cheaper and just as efficient substitutes are known.—A. R. P.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

STEEL										NON-FERROUS									
STEEL										NON-FERROUS									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

**COMMON ELEMENTS**

**OPTIONAL SYMBOLS**

**OPEN**

**NATIONAL SYMBOLS**

**ASST. S.A. METALLURGICAL LITERATURE CLASSIFICATION**

**SECTION DIVISION**

**SUBJECT**

**DATE**

**REMARKS**

**PROCESSING AND PROPERTY NOTES**

**HOT-SHORTNESS OF ALUMINUM ALLOYS IN DIE CASTINGS**

**Vero. Roy Hong Palatin-Joseph Univ. Tech. Rep.**

**Hot-shortness**, **Tah. Peps Mining Mt. 7, 138-621 (1971)**

Hot-shortness is defined as the tendency of an alloy to  
crack during cooling in the mold. It is proposed  
that the extent of hot-shortness is expressed numerically  
by the frequency of cracks occurring in castings of simple  
shape, given as a percentage of the cracked samples to all  
castings. In alloys containing more than 12% of liquid  
at the temp. of the critical pasty state possible cracks can  
be prevented. Data on strength and load are not always  
sufficient to test hot-shortness of an alloy. The influence  
of temp., wt. and cooling factor of the mold and of pouring  
temp., etc., is discussed and possibilities of avoiding  
cracks are shown.

S. S. de Fombly

9



CA

9

PROCESSING AND PROPERTY NOTES

The effect of the cooling rate upon the quantity of hyper-eutectoid ferrite. J. A. Aitô. *Riv. Metall. Ital.* 9, 192 (1967), cf. *ibid.* 31, 782 (1967). The amt. of structural constituents was detd. by the method of Remond on samples of unalloyed steels heated to a temp. of 540° above the A<sub>1</sub> point for 1 hr. and cooled at varying ranges. The slow cooling used in practice produces no equl. conditions. Industrial steels always contain less ferrite than is to be expected from equl. diagrams. The relation of amt. of ferrite to C content is a straight line in equl. In other cases various curves are formed. Steels consisting of nearly equal amts. of ferrite and pearlite are most affected by the variations in cooling rate. A simple relation seems to exist between the quantity of constituents and the type of structure produced. S. S. de Fina

ASB. S.A. METALLURGICAL LITERATURE CLASSIFICATION

STEEL ONE DIV 101

**Effect of velocity of cooling on the amount of hypoeutectoid ferrite.** *Josef Vercel - Admynis. Kohlen. Lapok 79, 245 (1937).* Ordinarily slow cooling in metallurgical practice is not slow enough to produce equi. in the metal. The theoretical equi. diagram thus cannot be used for con. steels. The relation of C content to the amount of structural elements can be represented by a linear equation in equi. Outside the equi. the relation seems to be a curve, deviating the more from the linear, the more rapid the cooling procedure. The change of velocity of cooling affects most those steels that contain almost the same amounts of ferrite and pearlite. There is a simple relation between the structure and the amt. of hypoeutectoid ferrite. S. S. de Finis.

S. S. de Pinay

### ASME-A METALLURGICAL LITERATURE CLASSIFICATION

77

COINAGE AND THE PRECIOUS METAL INDUSTRY IN HUNGARY. J. Verő (Műt. berg-  
u. Ausenmdan. Abt., Kgl. Ung. Palatin-Joseph-Univ., Sopron (Hungary), 1934,  
10, (3), 482-485).—[In German.] Outlines the development and present  
state of minting and of the precious metal industry in Hungary.—N. B. V.

24

ASO. SEA METALLURGICAL LITERATURE CLASSIFICATION

62

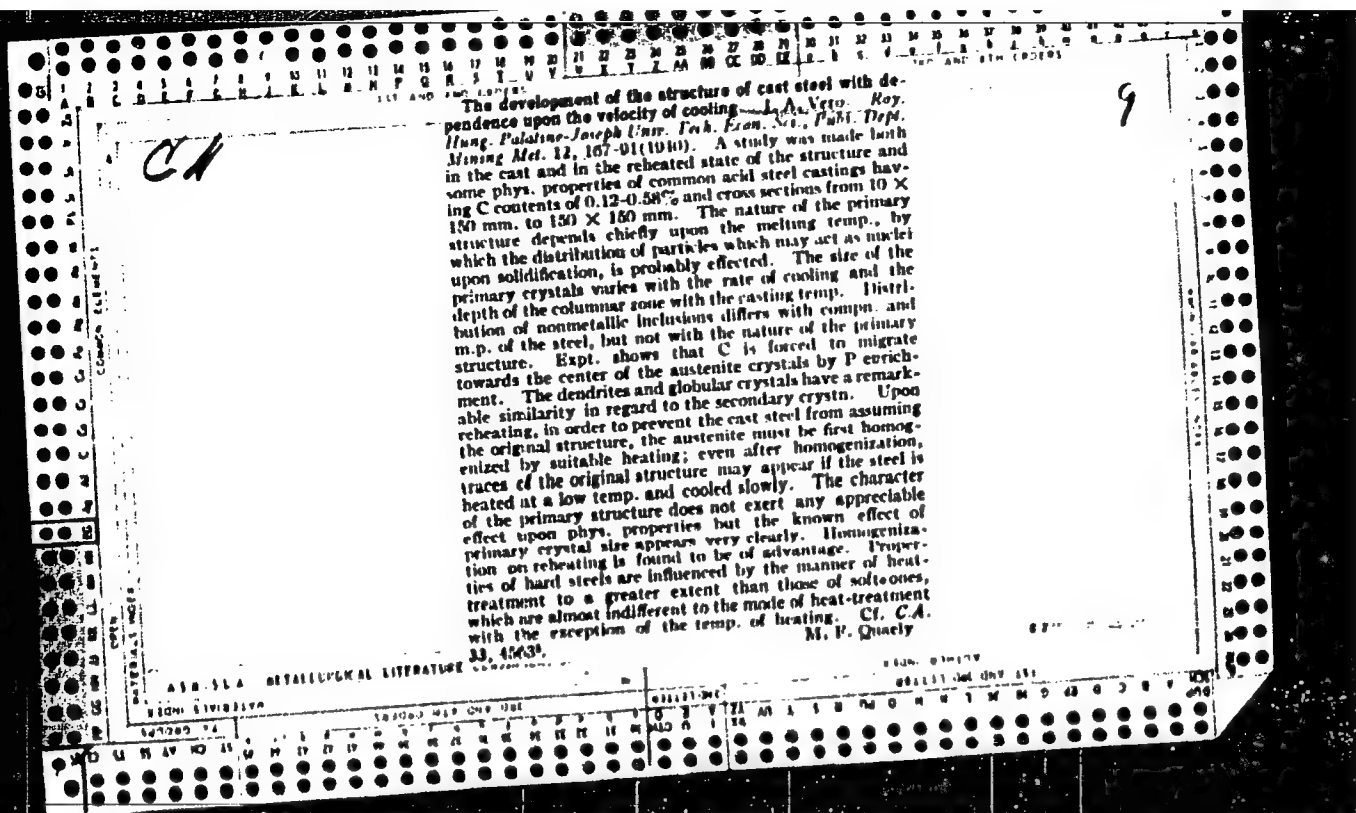
The nomenclature of the structural components of steels. J. A. Yerz. *Hinydis. Kokiss. Lapok 72, 371-374 (1950)*. --As the present names of structural elements of steels are not sufficiently clear, the following proposals are made: (1) Pearlite is a eutectoid consisting of alternate layers of ferrite and cementite the structure of which can be resolved by an objective at an aperture of 0.3 by a magnification of 250. (2) Sorbite is a lamellar eutectoid consisting of ferrite and cementite the structure of which cannot be resolved by an objective at an aperture of 0.3 by a magnification of 250, but can be resolved at an aperture of 1.0 by a magnification of 1000. (3) Troostite is a lamellar eutectoid the structure of which cannot be resolved at an aperture of 1.0 and a magnification of 1000.

S. S. de Finály

ASME-STEEL METALLURGICAL LITERATURE CLASSIFICATION

PERCENTAGE AND PROPERTIES INDEX	
<p><b>Alitized Iron As Sulphur Resistant Material.</b>  <b>J. A. Vero.</b> (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy, 1940, vol. 12, pp. 158-160). It was desired to find a metal for making baskets for coking briquettes in a low-temperature carbonization plant. The material had to be resistant to a reducing atmosphere containing <math>H_2S</math> at temperatures up to <math>600^\circ C</math>. "Alitized" steel was found to be more resistant than high-chromium steel. Steel is alitized by heating it for 3 hr. or longer at <math>930-950^\circ C</math>. embedded in a mixture of burnt alumina 49 parts, 55/45 aluminium-iron alloy 49 parts, and ammonium chloride 2 parts; hydrogen is passed slowly through the tubular furnace during the process. At room temperature the alitized layer is somewhat brittle, but at <math>500^\circ C</math>. it can be bent sharply without cracking. Data on the properties of alitized steel wire at temperatures in the <math>400-900^\circ C</math>. range are presented and compared with similar data for mild steel and chromium steel wire.—R. A. R.</p>	
<p>16</p>	<p>16</p>





<p>3</p> <p>7</p> <p><b>The Theory of Segregation in Ingots. J. A. Veró.</b> (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy, 1941, vol. 13, pp. 183-185). The solidification of ingots is described in detail and the phenomena are related to the equilibrium diagram. It is shown that no segregation can be caused by the formation and growth of the primary crystals, even in the case of solidification in layers. Gas pressure and volume changes are the only factors during primary crystallization which produce segregation. The pressure of liberated gases may cause normal, but not inverse, segregation. The logical explanation covering all types of segregation is that normal segregation is due to an increase in volume during primary crystallization and that inverse segregation is due to a volume contraction. Liberation of gas from the alloy means a volume increase, and therefore causes normal segregation. H. A. R.</p>																									
<p>ASP-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																									

1ST AND 2ND ORDER		3RD AND 4TH ORDER	
PROCESSING AND PROPERTY INDEX			
CA		2	
<p>The solidification of solid solutions. J. A. Yarn (Metal- lurgical Inst., Palestine-Jordan Univ.), <i>Rev. Hung. Pale-</i> <i>stine-Jordan Univ. Tech. Econ. Sci., Publ., Dept. Mining</i> <i>Met. 14, 224-27 (1962).</i>—Theoretical. It is incorrect to assume that when a solid soln. crystallizes, there is a liquid phase containing a higher concn. of the alloying element than the value indicated by the liquidus curve, even though the crystals do not show the final composition. The assumption that the liquid phase always has the composition indicated by the liquidus curve was not proven experimentally because it was felt that fully convincing results could not be ob- tained. The only method suggested is to cool an alloy at a relatively high rate, to prevent diffusion, until a certain temp. is reached, and then change the cooling rate (by quenching) at that instant, so that the liquid present at that point would solidify in a structure that is plainly dis- tinguishable from that of the previously formed crystals. Formulas are derived for the relation of the liquid phase to the temp. and for the mean concn. of the crystals existing at every temp. H. F. Pool</p>			
ASS-354 METALLURGICAL LITERATURE CLASSIFICATION			
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<p><i>M</i></p> <p><b>The Theory of Segregation.</b> Jozsef Verö (<i>Bányászati és Kohászati Lapok</i>, 1942, 75, 52-59, 71-78; <i>Chem. Zentr.</i>, 1942, 113, (11), 504; <i>C. Abs.</i>, 1943, 37, 4940).—Crystallization changes during the freezing of a cast block of metal are discussed with the aid of the phase diagram. Partly from theoretical considerations, and partly by experiment, it is shown that the concentration change in the cast block is influenced by the volume change on separation of the primary crystals. If the volume increases, the segregation is normal; if it decreases, it is inverse. The separation of gas is equivalent to an increase in volume. In the crystallization of steel, although the volume decreases, the segregation is generally normal because of the release of a large quantity of gas.</p>										<p><b>2</b></p>									
<p>ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>FROM STUDENT</p>										<p>FROM GROUP</p>									
<p>GROUP</p>										<p>CLASS</p>									

**Notes on the Static Testing of Welds.** A. Schleicher and J. A. Veró. (Royal Hungarian Palatine-Joseph University. Publications of the Department of Mining and Metallurgy, 1943, vol. 13, pp. 171-205). Tensile and hardness tests were made on specimens cut from welded joints in mineral-oil and natural-gas pipe lines of steel containing 0.3% max. of carbon. Hungarian and German testing procedures were employed and the former specifications were found to be too rigid.—R. A. R.

**CIA-RDP86-00513R001859520009-2"**

PROCESS AND PROPERTIES INDEX																									
1ST AND 2ND ORDER													3RD AND 4TH ORDER												
<p>CA 4</p> <p>Experiments in electrolytic polishing of metal sections            Jozsef Vero (Univ. tech. Wirtschaftswissenschaften Hutt            tenmann Abt., Sopron, Hungary). <i>Magyaripolitik</i>            Kozlonye 21, 60-76(1943); <i>Chem. Zentr.</i> 1944, II, 360.            The method used is described, and the results obtained in            the polishing of Fe, Al, and Cu alloys are reported. Steel            specimens were treated in the Jacquet perchloric acid            acetic acid electrolyte (cf. preceding abstr.) at an ap-            preciable c.d. than that reported in the literature.            Instead of 3-6 amp./sq. dm., a c.d. of 0.65-0.7 amp./sq.            cm. was used for steels of ferrite, pearlite, and martensite            structure and about 1.4 amp./sq. cm. for those of austen-            ite structure. The high-chrome steels came from the            electrolyte already etched. In polishing Al alloys by            use of the electrolyte of de Sy and Haemers (<i>C.A.</i> 35,            6222) vigorous stirring is especially important, since            otherwise the r.d. necessary for polishing produces a spotty            section because of overheating. Cu alloys were polished            in an electrolyte contg. pyrophosphoric acid.</p> <p>M. G. Moore</p>																									
<p>ASB-11A METALLURGICAL LITERATURE CLASSIFICATION</p>																									

*Dr. Aba*

*C. J. Bergman, Phil  
Lemus*

136. Relation of Brinell, Vickers, and cone hardness. J. A. Verö.  
(Hungarian Polakine Joseph Univ., Fadt. Dept. Min. Mat., 1944-47.  
10, 3-19; J. Iron Steel Inst., 1948, 188, 536).—Using a 2.5-mm.  
steel ball, a Vickers and a Rockwell hardness-testing instrument,  
tests were made on Fe, Cu, Al, and their alloys to establish a re-  
lation between these methods. Results are discussed.  
R. B. CLARK.

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V-16

**INFLUENCE OF THE WALL THICKNESS ON THE WELDABILITY OF STEEL. J. YERZ.**  
 (Banyaszati es Kohaszati Lapok, 1948, vol. 3, Nov. 15, pp. 277-287). (In Hungarian). The influence of the wall thickness on the cooling rate of welded steel parts is analysed and theoretical conclusions are compared with results obtained experimentally. The temperature distribution round a point of heat input is given by the  $J_0$  Bessel function for thin sheets, and by the (since  $\gamma$ )  $J_1/J_0$  function for thick plates. The isotherms have a cylindrical shape for thin sheets, whilst for thick plates they are spherical. The structural changes of the base metal permit the determination of the maximum temperatures reached during the welding process at various points, and the values obtained enable the maximum temperature characteristics of the cross-section affected by the welding to be plotted. The places where the  $A_1$  and  $A_2$  temperatures were reached can be recognized and their distance from the parent-metal/weld-metal line can be measured. The curve for maximum temperature plotted against this distance is flattest for 7-mm. sheets whilst it gets steeper for thinner as the initial cooling speeds as a function of the wall thickness, and this speed is lowest for 7-mm. sheets. The influence of

J.C.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

ROOM DIVISION

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REMARKS



**Electrolytic polishing of aluminum alloys and the appearance of their constituents in the electropolished condition.**  
**J. A. Vero (Univ. Tech. Sci., Sopron, Hung.). Univ. Tech.**

*Sci., Sopron, Publ. Dept. Mining Met. 17, 2130(1948-1949)(in English). - Attempts to obtain satisfactory polishing effects in Jacquet's  $\text{AcOH-HClO}_4$  electrolyte (cf. C.A. 29, 5249) were unsuccessful. Good results were attained with an electrolyte of  $\text{EtOH}$  and  $\text{HClO}_4$  proposed by De Ry and Haas (C.A. 25, 6222). Every specimen was better near the edges than in the center. The electropolishing was done at 110 v. at 0.8 amp/cm<sup>2</sup> in a cell, a sept. of electrodes of 40 mm. Polishing is best done with frequent interruptions. This method is satisfactory for finishing samples for microscopic exam., except with alloys containing Si. Photographs show the appearance of various constituents of the alloy. Odd shapes proved more adapted for polishing to even surfaces than rounded or cube shapes. After many attempts, a slice 0.8 mm. thick cut from a rounded cast bar 16 mm. in diam. was found best. When high c.d.s. were applied it was advisable to switch on the current for one or two sec. only and interrupt for about 10 sec. to avoid black-spot formation. Javan Finaly*



CA

9

Removal of gases from molten metals. Josép Vergés. *Revis. Kohrs. Lapoh* 82, 473-82 (1949). — Math. discussion of 4 methods for gas removal: (1) freezing the molten metal in an atm. free from H, (2) storing the molten metal in an atm. free from H, without freezing it, (3) leaching out the molten metal with a gas insol. in the metal, (4) melting the metal in *vacuo*. The discussion considers practically exclusively the removal of H occluded by metals. For quick degassing, methods (3) and (4) seem to be most suitable. I. Pinsky.

VERE, J.

The Theory of the Degassing of Molten Metals. J. Vere. (Acta Technica Academiae Scientiarum Hungaricae, 1950, 1, 1, 130-155). (In Russian).

The occlusion of hydrogen by metals is discussed and formulae representing general relationships between the amount of occluded hydrogen, its partial pressure, and the temperature of the metal are derived. The methods and mechanism of degassing metal are reviewed and the theoretical limits of degassing under different conditions are expressed by general formulae. On theoretical grounds it is shown that the only practical method of degassing is by blowing an inert gas through the molten metal; in all other methods the diffusion of hydrogen through the metal is the controlling factor in the velocity of degassing. E25

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5

Simplification of St. Galik's Calculation for Converting the Elongation of One Gauge Length to Another Gauge Length. J. Vero. (Banyaszati es Kohaszati Lapok, 1950, vol. 5, Apr., pp. 279-280). In Hungarian. The author has developed two series of curves, which are presented, to enable elongation values obtained on one gauge length to be converted to another gauge length without having to measure the permanent elongation, as was necessary with St. Galik's method.—  
R. A. R.

ASME-A METALLURGICAL LITERATURE CLASSIFICATION

Metallurgy: Metallurgy  
7

CA  
Dilatometric determination of the solidus temperature.  
J. A. Varga (Tech. Univ., Sopron, Hung.). *Acta Tech.*

*Acad. Sci. Hung. 2, No. 1, 97-113(1961)(in English).—*  
The expansion owing to melting can be used to det. the  
solidus temp. of alloys with a dilatometer. Different types  
of Al alloys were examd. by this method and their solidus  
temp. detd. Alfred M. Fossamer

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J. VERO.

"On the stability of nuclei in metallic melts." p. 209 (ACTA TECHNICA ACADEMIAE  
SCIENTIARUM HUNGARICAE, Vol 6, no. 1/2, 1953, Budapest, Hungary)

SO: Monthly List of East European Accessions, I.C., Vol. 2 No. 7, July 1953, Uncl.





VITO, J.

Institutes in Moscow for the training of metallurgical engineers. p. 67.  
KOMASZAI LAPOK. Vol.12, no. 3, Mar. 1957, (Budapest, Hungary)

SO: Monthly List of East European Accessions (FEAL) LC. Vol. 6, no. 12, Dec. 1957.  
Uncl.

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Development of a weldable manganese-titanium-aluminum alloyed steel of the St 52 type in Hungary. G. Kristof, P. Szucs, J. A. Verő, and B. Zorkóczy. *Neue Hütte* 3, 425-432 (1958). Confronted with the need to formulate St 52 steel (tensile strength, 52; yield point, 35 kg./sq. mm.) by using alloying materials available in Hungary, the authors investigated the properties of steel contg. Mn, Si, Al, and Ti. They found that Ti steels (0.02-0.17% Ti) show up favorably in tests (notched-bar shock resistance at -50° to +30°, tensile strength, Jominy hardness), comparing their mech. properties with those of other St 52 steels. Loss of tensile strength on cooling to -40°, on aging, and in the brittlest portion of the welding zone is less for steel contg. Ti than for Ti-free St 52. This compensating effect of Ti is the more marked the higher the content. The fine-grained state of Ti steel is more stable than that of Al steels or of other fine-grained steels. Charts and photomicrographs illustrate these points. J. G. S.

VERU, J.

Methods for Investigating Inclusions in Steel

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VERO, J.

Methods of investigating steel impurities. p.449

KOHASZATI LAPOK. (Magyar Bányászati és Kohászati Egyesület)  
Budapest, Hungary  
Vol. 13, no.10/11, Oct./Nov. 1958

Monthly List of East European Accessions (EEAI) I.C., Vol. 8, no.7, July 1959  
Uncl.

VERO, J.

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// The influence of austenitic grain size on the M<sub>s</sub> temperature. Josef A. Vero and M. Szikszai. *Acta Tech. Acad. Sci. Hung.* 27, 419-427 (1959) (in English).— Four steels contg. C 0.3-0.5, Mn 1.32-1.6, Si 0.11-1.01, and Cr 0-0.53% were tested, 1 being a com. eutectoid Mn-Si steel without Cr, and 1 with highest Cr being a lab. hypoeutectoid melt with low Si. In these steels the Cr:C ratio was sufficiently low to prevent the presence of any difficultly sol. Cr carbides, and hence insure that the austenite transforming to martensite would always have the same compn. In a given steel, irrespective of the austenizing temp. used for producing the desired grain size. The dilatometric results on all 4 steels, except for 2 detns. at the coarsest grain size, showed a linear relation of M<sub>s</sub> temp. to grain size, with coarsening by 1 no. raising the temp. 12-13°. George F. Conrad.

VERO, Jozsef, akademikus

Regularity in the change of the hydrogen content in the  
open-hearth steel. Koh lap 9 no. 3: 100-101 Mr '54.



SZELE, Mihaly, egyetemi tanar; MARTOS, Ferenc; CLAUS, Alajos; HARGITTAY, Sandor; VERO, Jozsef, dr.

An account of the Executive Committee session held on May 24, 1957.  
Koh lap 12 no. 4/5 199-208 Ap-May '57.

1. Orszagos Magyar Banyaszati es Kohaszati Egyesulet elnoke  
(for Szele).
2. Orszagos Magyar Banyaszati es Kohaszati Egyesulet fotitkara  
(for Martos).

VERO, Jozsef

Ivan Pavlovich Bardin (1883-1960): an obituary. Magyar Tud 67 no.4:  
229-231 Ap '60. (EEAI 9:9)

(Bardin, Ivan Pavlovich)  
(Russia--Metallurgy)

VERO, Jozsef

Dr. Aladar Schleicher; on the occasion of his 80th birthday. Mussaki  
kozl MTA 19 no.1/4:39-42 '61.

KALDOR, M., candidat of eng.sc.; VERO, J. A., member of the Hungarian Academy of Sciences

A method to reveal austenitic grain size in hardenable steels; Report No.18 of the Working Community for Metallurgy of the Hungarian Academy of Sciences. Acta techn Hung 34 no.1/2:177-184 '61.

ADAM, Antal (Sopron); VERO, Jozsef (Sopron)

Tellurium prospecting in a strongly cracked tectonic area. Muszaki  
kozl MTA 28 no.1/4:437-446 '61. (KEAI 10:9)

1. Magyar Tudomanyos Akademia Geofizikai Kutato Laboratoriuma, Sopron.

(Tellurium)

VERO, Jozsef, akadémikus, egyetemi tanár

Conference of the Baykov Institute in Moscow. Magyar tud 68  
no.12:766-769 D '61.

1. Intezeti igazgató, Vasipari Kutató Intézet.

VERO, Jozsef, dr.

Appraisal of microscopic methods for inclusion testing. Koh lap 95  
no.1:9-13 Ja '62.

(Steel)

VERO, Jozsef, dr., akademikus; TRANTAVE SZIKSZAI, Marta

Studying the phase changes of steels by a dilatometer. Koh lap 95  
no.9:398-402 S '62.

1. Nehezipari Muszaki Egyetem Metallografiai Tanszek.



VERO, Jozsef, dr

On the brittleness of MTA 50 steels. Koh lap 97 no.9:  
402-407 S '64.

VERO, Jozsef, dr.

On the brittleness of MTA 50 steels. Koh lap 97 no.10:  
456-463 0 '64.

ACC NR: AP7003588 (AV) SOURCE CODE: HU/9001/66/007/004/0157/0162

AUTHOR: Hollo, Lajos; Vero, Jozsef

ORG: none

TITLE: New investigations regarding variations in the Earth's electromagnetic field and sun-physics data, recurring at 27-day intervals

SOURCE: Magyar geofizika, v. 7, no. 4, 1966, 157-162

TOPIC TAGS: magnetic field, magnetic field intensity, Earth magnetic field, alternating magnetic field, sunspot, sunspot cycle, telluric current, astronomic observatory, telluric current reading

ABSTRACT: The authors compared data based on velocity readings of telluric currents at the Nagycenk Observatory [Hungary] during 1960—1962 with readings made during 1957—1959. They found a significant change in the degree of correlation. This seemed to confirm that during periods of low solar activity and gradually starting magnetic storms pulsation shows increasing periodicity. The readings also showed that pulsations which do not depend on magnetic activity have a lesser

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ACC NR: AP7003588

tendency to recur at 27-day periods. The paper was presented in a lecture on  
24 February 1964. Orig. art. has: 3 figures and 4 tables. [KS]

SUB CODE: 08/SUBM DATE: none/ORIG REF: 001/OTH REF: 002/

Card 2/2

L 30212-66 FCC

SOURCE CODE: HU/2554/65/052/01-/0065/0076

ACC NR: AT6020297

43

AUTHOR: Vero, J.--Vere, I.

B+1

ORG: Research Laboratory for Geophysics, MTA, Sopron

TITLE: Possibility for the determination of the telluric tensor

SOURCE: Academiae scientiarum hungaricae. Acta technica, v. 52, no. 1-2, 1965, 65-76

TOPIC TAGS: telluric current, geometry

ABSTRACT: It was shown that the relative ellipse method has certain disadvantages for evaluating telluric measurements. A method in which a parallelogram is used in lieu of the ellipse was developed and it was shown that most of the disadvantages are thereby eliminated. The parallelograms involved are easier to construct and the uncertainty of the great axis of the ellipse is eliminated. The method will not eliminate the uncertainty of the small axis; however, it is applicable even in cases where the ellipse is a prolate one. Another slight disadvantage of the new method is that the parallelogram is less illustrative than is the ellipse in the determination of the telluric tensor. Orig. art. has: 6 figures, 9 formulas, and 1 table. [Orig. art. in Eng.] [JPRS]

SUB CODE: 08, 12 / SUBM DATE: 02Nov63 / OTH REF: 003

Card 1/1 CC

VERO, Jozsef

A possibility for telluric tension determination. Muszaki  
kozl MTA 34 no.4:443-453 '65.

1. Research Laboratory of Geophysics of the Hungarian Academy  
of Sciences, Sopron.

VERO, Jozsef, dr., akadémikus, tanácsvezető egyetemi tanár; MTA, Földrajz,  
egyetemi tanársegéd

Effect of nitrogen on some properties of the MTA 50 steel. Koh  
lap 97 no.8:353-359 Ag '64.

VERO, Jozsef, akademikus

Reaction kinetics of the decarbonization of unalloyed steel.  
Muszaki kozl MTA 34 no. 1/2: 127-141 '64.

1. Metallurgical Working Group, Hungarian Academy of Sciences.



SZUCS, Endre; KOVACS, Sandor; MESTER, Istvan; JUNG, Bela; LELKES, Gabor;  
SCHUSSLER; HAJTO, Nandor, dr.; VERO, Jozsef, dr.

Remarks about Nandor Hajto's lecture entitled "Mn-Ti  
containing casehardened steels." Koh lap 9 no. 3: 102-108  
Mr '54.

1. Darutervezo Iroda (for Schussler).

VERO, Jozsef, dr.

Aleksandr Mikhailovich Samarin at 60. Mussaki kozl MTA  
32 no.1/4:3-5 '63.

VERO, Jozsef, dr.

Stylistic errors in Hungarian technical texts. Koh lap 96  
no.11:501-503 N°63.

VERO, J.A., member of the Hungarian Academy of Sciences

The disintegration of eutectic carbide in high-speed steel during forging. Acta techn Hung 44 no. 3/4:419-436 '63.

1. Working Community for Metallurgy of the Hungarian Academy of Sciences.

VERO, József, prof.

Hungarian technical terminology. Musz elet 18 no.13:3  
20 Je '63.

VERO, Jozsef, dr.

Hungarian and foreign weldable steels alloyed by titanium. Koh lap  
96 no.4:161-163 Ap '63.

VERO, J.

Distr: 4E2c.

343/00.

689,14,069,86

Degassing of steel in vacuum. J. Ver G. Kolduzsi Lapol.  
Vol. 62, 1959, No. 12, pp. 689-693, 16 figs., 3 tabs.

A molten metal loses gas in vacuum by two different mechanisms, by the formation of gas bubbles and by diffusion. The formation of gas bubbles occurs in a measurable quantity only in a small layer near the surface of the melt because of the metallostatic pressure of the melt and because of surface tension; gas losses by this mechanism are low when referred to the entire volume of the melt. The rate of gas discharge by diffusion is slow, the process requires more than an hour.

An analysis of the probable results of these two mechanisms shows that — besides melting in vacuum — successful and quick degassing is preferably effected by casting in vacuum. The conclusions of this theoretical analysis are corroborated by laboratory and field tests. Equipments designed for the melting, casting and degassing of steel are evaluated on the basis of the degree of degassing obtained and on the possibility of handling considerable quantities of steel.

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ADAM, Antal; VERO, Jozsef

A preliminary report on the national measurements of telluric currents  
by the Geophysical Research Laboratory of the Hungarian Academy of  
Sciences. Geofiz kozl 10 no.1/4:27-37 '62.



VERO, Jozsef

Calculation of the telluric station ellipse. Geofiz kozl 10 no.1/4;  
155-161 '62.

VERO, Jozsef, dr.

Disaggregation of the eutectic carbide of high-speed steels during forging. Koh lap 96 no.2.49-56 P '63.

ADAM, Antal (Sopron); VERO, Jozsef (Sopron)

Changes in the earth's electromagnetic field and their  
utilization in the research on terrestrial structure. Fiz szemle  
14 no.7:207-214 JI '64.

VERO, Sandor

Cultural competition between the socialist brigades of the Aron Gabor Iron Foundry. Munka 10 no.1:17 Ja '60.

1. Szakszervezeti bizottsagi titkar, Gabor Aron Vasontode es Gepgyar.